What is claimed is:

1. A corrosion-resistive member, comprising a corrosion-resistive face which is to be exposed to a corrosive gas causing ion bombardment, at least a part of said corrosion-resistive member comprising a sintered body of silicon nitride having an open porosity of not more than 5%, said silicon nitride sintered body constituting said corrosion-resistive face, said corrosion-resistive member having a characteristic that if two auxiliary planes are formed by cutting the corrosion-resistive member to intersect vertically with said corrosion-resistive face and to be located vertically to each other, said two auxiliary planes satisfy the following orientation index between said two auxiliary planes being not less than 0.8 and not more than 1.2, and the following orientation index between the corrosion-resistive face and each of the auxiliary faces being not less than 1.5.

Orientation index between the two auxiliary planes

$$= [Is1(320)/(Is1(320) + Is1(002))]/[Is2(320)/(Is2(320) + Is2(002))]$$

wherein Is1(320) denotes an intensity of X-ray diffraction at a 320 face of β-type silicon nitride in one "Is1" of the auxiliary planes, Is1(002) denotes an intensity of X-ray diffraction at a 002 face of β-type silicon nitride in the auxiliary planes "Is1", Is2(320) denotes an intensity of X-ray diffraction at a 320 face of β-type silicon nitride in the other auxiliary plane "Is2", and Is2(002) denotes an intensity of X-ray diffraction at a 002 face of β-type silicon nitride in the auxiliary planes "Is2".

Orientation index between the corrosion-resistive face and each of the auxiliary planes

$$= [Im(320)/(Im(320) + Im(002))]/[Is(320)/(Is(320) + Is(002))]$$

wherein Im(320) denotes an intensity of X-ray diffraction at a 320 face of β-type silicon nitride in the corrosion-resistive face "m", Im(002) denotes an intensity of X-ray diffraction at a 002 face of β-type silicon nitride in the corrosion-resistive face "m", Is(320) denotes an intensity of X-ray diffraction at a 320 face of β-type silicon nitride in the auxiliary plane "Is", and Is(002) denotes an intensity of X-ray diffraction at a 002 face of β-type silicon nitride in the auxiliary planes "Is".

2. The corrosion-resistive member set forth in claim 1, wherein the total content of elements in Group Ia and Groups 4a - 3b of the Periodic Table in the silicon nitride sintered body is not more than 50 ppm by weight.

3. The corrosion-resistive member set forth in claim 1 or 2, wherein one or

more metal elements selected from Group 2a and Group 3a in the Periodic Table are contained in a total amount of 1 to 15 mol% in said silicon nitride sintered body as calculated externally in the form of the metal element(s) relative to said silicon nitride.

4. The corrosion-resistive member set forth in claim 3, wherein the silicon nitride sintered body further comprises one or more elements selected from calcium, strontium, barium, magnesium, yttrium and lanthanoids elements.

5. The corrosion-resistive member set forth in claim 4, wherein said silicon nitride sintered body comprises one or more elements selected from the group consisting of magnesium, yttrium, cerium, samarium and lanthanum.

6. The corrosion-resistive member set forth in any one of claims 3 to 5, wherein comprises an oxide of at least one element selected from Group 2a and Group 3a in the Periodic Table.

7. The corrosion-resistive member set forth in any one of claims 1 to 6, which has a thermal conductivity of 50 W/m · K or less.

8. The corrosion-resistive member set forth in any one of claims 1 to 7, wherein the corrosive gas is a halogen-based corrosive gas or a plasma of the halogen-based corrosive gas.

9. A semiconductor-producing article comprising the corrosion-resistive member set forth in any one of claims 1 to 8 as a substrate.